

Calendar of Patent Records.

January 1, 1905.—Previous to 1905 no question as to the novelty of an invention for which a patent was being sought was raised by the British patent office, but under the provisions of the Patents Act, 1902 (2 Edw. 7, cap. 34), which came into force on Jan. 1, 1905, an official search for novelty was instituted; the examination, however, extending only to completed British patent specifications on applications not more than fifty years old. This limited search has not been altered by later Acts and is still the practice of the office, some 21,000 specifications being so examined each year.

January 3, 1561.—One of the earliest of English industrial monopoly patents was for the manufacture of soap. Soft soap was at that time the only kind made in England, and the patent is evidence of an attempt to introduce into this country the hard soap industry of Marseilles and Spain. The grant was for ten years from Jan. 3, 1561, to Stephen Groyett and Anthony Leleuryer to make white hard soap "like of goodness fynes and puritie as the sope is which is made in the sope houses of Triana or Syvile," and it contained a clause to the effect that two at least of the workmen were to be of English birth. The grant also stipulated that the soap was to be subject to inspection by officers appointed by the Lord Mayor and the Lord Chancellor, and that the patent would be voided if the soap were found to be deficient in quality. It is improbable that the invention was put into successful operation.

January 3, 1839.—The atmospheric system of rail-way propulsion attracted general attention in England and on the Continent during the forties of last century. Under it a train was propelled by means of atmospheric pressure acting on a piston working in a continuous tube laid between the rails, a vacuum being created in front of the piston by stationary engines situated at convenient intervals along the line. The piston was connected to the first carriage or 'locomotive' by means of a rod working through a slot in the top of the tube, and the great difficulty of the early experimenters lay in the design of a valve for the slot which would open and shut satisfactorily on the passing of a train. Samuel Clegg was the first to find a practicable solution, and he patented his invention on Jan. 3, 1839. In conjunction with Jacob Samuda, of the Southwark Bridge Iron Works, he laid a short length of line for the Dublin and Kingstown Company between Dalkey and Kingstown which was opened in March 1843. Other lines were projected, notably one from Croydon to Epsom and London, part of which was built and opened, but the cost of working and other difficulties proved too great, and all the lines were closed down before 1848.

January 5, 1769.—It is unnecessary nowadays to emphasise the fact that James Watt did not invent the steam engine, but his achievements nevertheless entitle him to rank as one of the world's outstanding inventors. His first engine—the patent for which was granted on Jan. 5, 1769—doubled the efficiency of the old Newcomen engine and directly contributed to the great expansion of industry that took place during the latter part of the eighteenth and the nineteenth centuries. In 1775, Parliament extended the life of the patent, and it was not until 1800, after Watt himself had retired from active business, that the monopoly rights expired. By this time the new business of steam and mechanical engineering, which the success of the Watt engine had called into being, was definitely established.

January 7, 1625.—Wheeled coaches were introduced into England about the middle of the sixteenth century, and became increasingly popular in spite of restrictive legislation which, until the coming of the Turnpike Acts, attempted to fit the traffic to the roads rather than to improve the latter. Many attempts were made to render the coaches more comfortable and safe. A patent was granted to Edward Knappe on Jan. 7, 1625, for a coach in which the wheels and axle-trees were so placed and constructed "as in an instant of tyme the wheels maie be shutt closer together where the narrownes of the waie shall require itt, without anie danger, or to be enlarged and sett wyder as shall be most safe and easey for the passenger . . . as alsoe by hanging the bodie of the coach to the carriage by two springs of steele before and two behinde for the more ease of the treveller." No specification was enrolled and nothing is known about the actual construction. Springs did not come into use until some time later.

January 7, 1714.—Though typewriters were not in general use until toward the end of last century, British patent records and those of other countries show that for a long period there had been a serious and sustained effort to solve the problem of 'mechanical writing.' The earliest patent for such a machine was granted in England to Henry Mill, the engineer of the New River Company, on Jan. 7, 1714, with the title "An artificial machine or method for the impressing or transcribing of letters singly or progressively one after another as in writing, so neat and exact as not to be distinguished from print." No description of the apparatus has come down to us.

January 9, 1854.—Glycerine was discovered by Scheele in 1779, but it did not find extensive application until very much later. It was known that it formed a large part of the spent lyes from soap-making, but there was no great demand for it and no suitable method for its recovery, the small quantities which were required for medicinal purposes being made by saponifying oil with litharge. It was not until G. F. Wilson, of Price's Candle Co., introduced the process of separating the glycerine from the fat acids by means of steam at a high temperature that a pure glycerine could be economically obtained in large quantities. Wilson's process was based on that of R. A. Tilghman, which consisted in forcing an emulsion of fat and water through a coiled pipe heated in a furnace to a temperature of about 330°, for which a patent was granted on Jan. 9, 1854. The discovery of nitroglycerine as an explosive by Nobel in 1863 greatly increased the demand for glycerine.

January 9, 1857.—'Aerated bread' was made under the patent (2293 of 1856) granted to John Daughlish, which was sealed on Jan. 9, 1857. The invention consists of a process for aerating the dough without the addition of yeast or the usual chemical compounds. Carbon dioxide is forced into water under pressure and the charged water is then used for converting the flour into dough, the operation being carried out in a kneading machine in which the pressure is maintained until the kneading is completed.

January 11, 1841.—Alexander Bain was one of the pioneers in the application of electricity to clocks, his first patent, which describes a master clock system, being dated Jan. 11, 1841. The pendulum of his clock carries a coil in place of the bob, which moves in the field of two fixed magnets with north poles adjacent, a make-and-break device regulating the current to the coil so that the pendulum receives an impulse once in every swing to the right.